

REMARKS

Applicants thank the Examiner for the second complete examination of the instant application. Claims 1-4 are currently pending in this application. Claim 1 is independent. Reconsideration of this application is respectfully requested.

DRAWINGS OBJECTION

The Examiner has objected to the drawings in the current Office Action. That is, the Examiner requests that the “annular insulator 4 include crosshatching.”

Applicants submit herewith a Drawings Correction Authorization Request (“DCAR”) for the Examiner’s consideration. The DCAR includes a marked up version of FIG. 1 for the Examiner’s consideration.

The Applicants respectfully submit that the submission of the DCAR obviates the Examiners’ drawings objections. Acknowledgment of such is respectfully requested in response hereto.

REJECTION UNDER 35 U.S.C. § 103(A)

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hakamata et al., U.S. Patent No. 5,763,848 in view of Cherry et al., U.S. Patent No. 4,216,360 and Stegmüller, U.S. Patent No. 4,962,289. This rejection is respectfully traversed.

As previously indicated, independent claim 1 sets for a combination of limitations including “the power current connection of the moving contact tip being in the form of a

cylindrical bolt,...the power current connection of the stationary contact tip is in the form of a plate,...[and] a membrane which is provided with concentric corrugations, is in the form of a disk and is soldered on one side to the power current connection of the moving contact tip and on the other side via an axially running annular flange to the annular insulator.” Applicants respectfully submit, for the following reasons, that the patent documents relied upon by the Examiner, either in combination together or standing alone, fail to teach or suggest at least these limitations of independent claim 1.

Hakamata et al. teach an electrode for a vacuum circuit breaker. As is illustrated in Fig. 5, the vacuum circuit breaker includes an insulator cylinder 1 that has a pair of end plates 2 and 12 secured at both ends of the insulator cylinder 1. The circuit breaker also includes a stationary electrode 4 and movable electrode 5. The stationary electrode 4 is connected to a conductor 6, and the movable electrode 5 is connected to a conductor 7. Hakamata et al. clearly indicate that the “structure of both electrodes is identical.” (See column 3, lines 61-62.)

The Examiner states that Hakamata et al. “disclose the instant claimed invention except for: a power current connection of the stationary contact tip is in the form of a plate and a membrane disk with concentric corrugations, number of which should be at least 3.” Applicants respectfully submit that the Examiner’s statement only touches upon a few of the deficiencies of the Hakamata et al. patent document, when viewed in the light of the instant claimed invention.

In order to attempt to make up for the deficiencies of the Hakamata et al. patent document, the Examiner has relied upon Cherry et al. Cherry et al. teach a low voltage vacuum switch having an internal arcing shield. The low voltage vacuum switch according to Cherry et al. is

illustrated in Fig. 1 of the relied upon patent document. As seen in the figure, a low voltage vacuum switch 10 includes an annular insulating ring body portion 12. In addition, the low voltage vacuum switch 10 includes a pair of cylindrical conductive contact members 14a and 14b. Additionally, the switch 10 includes a mounting means 18a and 18b, which are electrically connected to cylindrical contacts outside the vacuum switch 10. (See column 3, lines 8-12.)

In addition to the above discussed patent documents, the Examiner has relied upon a patent to Stegmüller. Stegmüller teaches a switch chamber for a vacuum switch. As is illustrated in Fig. 4 of the relied upon patent document, a corrugated member 24 is fastened to a ring 25 and a contact pin 3 at a point outside an evacuable portion of the switching chamber. (See column 5, lines 55-58.)

Detailed analysis of each of the patent documents relied upon Examiner clearly shows that the documents relied upon by the Examiner, either in combination together or standing alone, fail to at least teach or suggest {a membrane...in the form of a disk and is soldered on one side to the power current connection of the moving contact tip and on the other side via an axially running annular flange to the annular insulator." (Emphasis added.)

In particular, none of the patent documents relied upon by the Examiner teaches the idea of having a membrane soldered on both sides, where the solder on one side attaches to a power current connection of the moving contact tip. Applicants have carefully reviewed the relied upon patent documents and are unable to find such a teaching. Moreover, none of the patent documents relied upon by the Examiner teaches an arrangement where the solder on the other side attaches the membrane to an axially running annular flange of an annular insulator.

Instead, turning to the Stegmüller document, the corrugated member 24 disclosed in the patent must be formed such that a collar 27 is included. This collar 27 is used to connect the corrugated member 24 to the ring 25. Therefore, necessarily, the corrugated member 24 is not designed to attach to a flange and does not attach to a flange, but instead is designed to contourly attach to the ring 25 by way of the collar 27. Therefore, the design of the membrane of the present invention is much easier and less costlier to produce than the corrugated member 24 of the Stegmüller document.

In addition, the Applicants respectfully submit that one of ordinary skill in that art would not look to Cherry et al. in order to modify the invention according to Hakamata et al. Specifically, as it is discussed hereinabove, Hakamata et al. discuss the fact that the structure of both electrodes 4 and 5 are identical. (See ~~column~~ 3, lines 60-64.) Moreover, each of these electrodes 4 and 5 includes identical conductors 6 and 7. To attempt to modify this structure according to Hakamata et al. with the teachings of Cherry et al. would destroy the operational functionality of the Hakamata et al. device. That is, attempting to substitute a planar mounting means 18a according to Cherry et al. for the conductor 6 would destroy the fundamental operating manner of the Hakamata et al. vacuum circuit breaker.

In accordance with the above comments, Applicants respectfully request reconsideration and withdrawal of the claim rejection under 35 U.S.C. § 103(a).

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider

and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is condition for allowance.

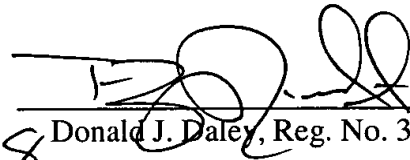
If the Examiner believes, for any reason, that personal communication will expedite the prosecution of this application, the Examiner is invited to telephone Timothy R. Wyckoff (Reg. No. 46,175) at (703) 668-8000 in the Northern Virginia area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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